18F Partnership Playbook

This guide will help you, as an agency, understand what it's like to work with 18F. The playbook is broken down into eight principles. You'll learn what to expect and get a sense of the challenges you may face when working with a modern digital service team, which will likely be a significantly different experience than working with a contractor. The principles we use in working together are:

1. We build in the open.
2. We work with an empowered product owner.
3. We focus on understanding the problem first.
4. We work in an agile way.
5. We use user-centered research and design methods.
6. We may revisit the project at a high level if there is a major change in project goals.
7. We transfer projects back to your team for ongoing support.
8. We deploy projects using best practice back-end methods and technology.

We'll explain what each principle will mean to you as our partner. We also provide a set of prompting questions in the *"How do you know if you're ready"* sections, which you can use with stakeholders to assess potential conflict points that may need to be resolved before we partner.

This playbook is a compliment to the U.S. Digital Services Playbook**.**

1. We build in the open

18F works in the open from day one of a project, and our resulting code is dedicated fully to the public domain. In addition, any contracts 18F enters into where others will develop software on 18F's behalf ensure that all results are dedicated to the public domain. For our international colleagues, 18F also permanently waives all copyright and related rights worldwide to code created by 18F or its contractors.

We operate in this way for three reasons.

1. **Operating in the open streamlines communication**. GitHub issues can be used without concern about access permissions and account creation. Access to the project is available regardless of VPN or location, without additional verification requirements. Open source repositories are an easy and accessible location to find source code when pulling in additional experts to check out a problem.
2. **Transparency builds trust with the public**, since everyone's work is accessible to others. Transparency also builds trust within the government, since we can freely pull and cite methods and ideas from existing projects without worrying about possibly revealing something inappropriate.

3. **Working in the open helps to encourage good documentation and coding practices**. Everyone is aware and following processes for open information from day one. There is no just-before-launch, last minute review of everything. All code and documentation is reviewed as it's developed.

What does this mean for you?

Your tools will be developed in public view. While our open source policy explicitly covers software, 18F also publishes much of its designs, product discussions, and other artifacts in the open as a matter of policy, principle, and working preference. In our experience, this fosters a healthier working environment that is more conducive to outside feedback and contributions, and increases operational awareness of the work across our project teams and those of our partners.

The public will be able to examine the code, point out issues, and suggest edits (all edits must be accepted by authorized personnel on the 18F or partner agency team). While they aren't guaranteed, we celebrate public contributions to our code. Interest groups may take note of the developing project once it's publicized.

Additionally, we will write about the work (or the process used to create the work) in public blog posts, case studies, or other means (social media, etc). Communicating openly is a critical process that we've put in place to stop the government from repeating the same mistakes. Not sharing solutions and best practices — both between different teams inside the government and between the government and private sector — has led to financial waste and damage to the public. We need the ability to communicate solutions as fast as we find them, and the most effective way to do that is to work in the open.

How do you know if you're ready to work in the open?

As you consider working with 18F, reflect on the following questions with your stakeholders. You may not be able to answer "yes" to each one, but they can help serve as indicators of potential conflict points that may need to be resolved before we partner. If any of these look like red flags to you, please raise them right away with your 18F point of contact and we'll work together to address them.

- Have you and your IT department discussed developing your project with open source?
- Has your agency developed other projects using open source code?
- Have you taken a look at 18F's GitHub repositories to become familiar with how open source projects look? (Example 1, Example 2, Example 3)
- Have you talked to your communications team about how you plan to announce and promote the project?

2. We work with an empowered product owner

It's important to us to get a full sense of your organization's needs and priorities. We know our partners' challenges can be highly complex and complicated with interoffice and stakeholder relationships. We've found that management of this complexity is best performed within your organization. To that end, we ask for one empowered product owner for day-to-day decisions and overall strategy guidance. Having this person named at the very beginning helps us focus on building the best product possible for you.

What does this mean for you?

We work best with an empowered product owner who can make decisions about the project we're partnering on. In agile development, a product owner is responsible for project scoping and prioritizing. Our delivery team will rely on the product owner for direction as the project develops. This product owner must be empowered to make decisions about the product. The product owner should be experienced at getting buy-in from other organizational leaders; support should be lined up before our engagement.

Your product owner and other relevant team members are part of a **joint product team** with 18F designers, product managers, and developers. We will explore the problem, do research to understand user needs, and design a solution together. Therefore, we look for a product owner who can devote at least 50 percent of their time to the project. The product owner is a core member of the design team and has plenty to do. In addition to participating in workshops, user research, and making product priority decisions, the product owner is also responsible for ensuring the agency recruits users, resolves agency governance issues, collaborates with other internal stakeholders, and more.

We look for a product owner who has already lined up internal stakeholder support. Any project will eventually impact or need buy-in (or technical integration) from a number of internal agency groups or systems. The product owner garners this buy-in and support. Before the engagement starts, the owner should have had conversations with and identified champions in relevant internal groups. Beginning these conversations in the middle of development can grind everything to a halt; they should be well underway by the time a digital service team is brought on board to deliver. We recommend that you map out the relevant stakeholders before embarking on a project.

How do you know if you have an empowered product owner?

- Is your product owner experienced with aligning stakeholders within the organization?

- Does your product owner have the authority to make decisions about the project?
- Has your product owner begun conversations and identified champions with necessary internal agency groups and stakeholders? Is there a diagram or stakeholder map of this?
- Does an internal governance process exist that the product owner can use to resolve issues as they arise? Does the product owner have support from your agency's leadership team with the expectation that they may need to ask for favors?
- Are there any other large initiatives underway that will pull attention away from the project?
- Has your product owner set aside at least 50 percent of their time to work on this project?
- Are there significant stakeholders who are not yet part of the project?
- Do you expect it to be difficult to align your stakeholders?

3. We focus on understanding the problem first

We want to build the right thing, not just anything. We know you probably have a very good idea of what you want us to do, but as your partner, it's important for us to revisit and **understand the problem** as a joint team using user-driven research. The first work we will do as a team is to interview users and agency stakeholders to understand more about the problem, desired goals and outcomes, and your organization's priorities. We call this "Discovery." After our initial research, we pull together insights based on what we've learned and reframe the problem. At that point, we're ready to begin designing a solution that works for your users and your agency.

What does this mean for you?

It's necessary for your team to express the outcomes and impacts you want to achieve — completely separate from any specific solution — so we can make sure our team focuses on the ultimate goal. When entering into a project, we will want to know what your organization is trying to achieve at a high level, but we look for partners willing to take a fresh look at the problem. The joint team will seek to build on your existing research and understand your users' needs in order to effectively design a solution for them.

For larger projects, we may do two to six weeks of research in which we speak directly with users and other stakeholders. This helps us properly frame the problem to be solved. The discovery period may include workshops with agency stakeholders to help co-design a solution. Typical user interviews may be:

- 45-60 minutes

- Preferably in person and in the location that these users regularly interact with your service (home, coffee shops, the office, etc.)
- Typically with two researchers, one to ask questions, one to take notes

Workshops with stakeholders typically:

- Include five to 15 stakeholders from an agency
- Range from 60-90 minutes up to a full day - or even multiple days - in length
- Focus on understanding goals and priorities

If there are significant commitments to a **specific solution** before engaging us, it may not be the best fit for our team as it limits our ability to play a role in defining the problem and solution and responding to user feedback.

How do you know if you're ready to understand the problem first?

- Are you willing to pay for two to six weeks of user and problem research?
- Can you identify ways we can immediately start to build a network of users to connect with?
- Has a specific solution or design direction already been settled on by stakeholders?
- Is there a date that has already been promised to stakeholders that does not leave time for a discovery process?
- Have you described the high-level outcomes or impact your organization is looking to achieve?
- Have you expressed your projects in terms of desired outcomes or impacts, separate from a solution?

4. We work in an agile way

We develop software using agile and lean methodologies. Agile software development methods have become the norm in the private sector and differ considerably from the "waterfall" software development method that is dominant in the federal government. In waterfall, agencies write documents with all of the requirements for a project and then a development team codes, tests, and delivers the full product. Agile principles value working code over documentation, iterative development based on user feedback, and focused development efforts in two-week sprints. Well-done agile projects are outcome and goal-driven, not feature-driven. When working together, we articulate our goals in terms of outcomes for the user, and then establish a way to gauge if our project meets those goals with qualitative and quantitative assessments that we carry out in each sprint.

Throughout the project, we'll produce prototypes and/or working code over short sprints and get it in front of users immediately in order to learn and refine our approach as soon as possible. As a team, we will iterate to a project's state of success (for example delivering the user and business outcomes we want to see) rather than an arbitrary predetermined final state. Software delivery is continuous, so there is never a true "done" state, which is why we focus on

measuring achievement of business and user outcomes—rather than completion of features—to gauge success.
Through the regular cadence of agile project meetings, we will revisit strategic project goals in order to maintain a shared understanding of the outcomes that constitute success.

What does this mean for you?

We don't work from requirement documents. As mentioned above, we engage with problems, conduct discovery research, develop hypotheses, and co-design a potential solution with your product owner. We understand requirements documents are the typical way projects start; if you have them, we'll look at them and use them as a starting point for a discussion — but not for development.

We build a product backlog of discrete chunks of functionality from the perspective of a user called "user stories." During each sprint, your product owner will work with our team to prioritize user stories and estimate how much work can be done during the sprint.

We also employ principles from the Lean Startup movement, where the assumptions about how a particular piece of functionality supports a business goal or outcome are explicitly articulated and tested. How often we learn from users, and learning whether or not a feature gets us closer to our goals, are the main measures of progress for our work in a sprint.

Every project has deadlines and time constraints. Yet, one of the tradeoffs of building the right thing is that it's not possible to know ahead of time exactly what features will be in a product by a certain date. By regularly revisiting and prioritizing the outcomes desired in the project, you can help ensure that the most important functionality can be included first.

How do you know if you're ready to work in an agile way?

- Are you willing to have a subset of your target audience use the product before it's polished?
- Are you willing to talk about the process of development with outside groups to gather feedback?
- Are you prepared to change direction rapidly on projects as the problem and possible solutions are understood more deeply?
- Has a specific solution already been promised to stakeholders with a deadline?
- Have you thought about or defined desired business outcomes (such as KPIs)?
- Is your product owner committed to participating in co-design activities, like design studios or constructive critique?

5. We use user-centered research and design methods

It's important for us to build digital services that solve the needs of users and are enjoyable to use. By the time you're designing a solution, you should have a solid understanding of the users you're building for and the problems you're trying to solve. Though the needs of agency stakeholders are important, the satisfaction of citizens or other end-users are the primary way we measure success.

Tip: In user-centered design, we conduct interviews with users to understand their needs and how they experience the status quo. Your agency can start by speaking with call center or customer service representatives to sketch out personas — or composite representative descriptions — of types of customers and what their needs and behaviors are.

What does this mean for you?

Together, we will prioritize your users and their problems. Most agencies serve several different user groups. Who are your most important users, and what problems are you solving for them?

User stories are the primary way of expressing software functionality without specifying how it's technically implemented. As the agency representative, your product owner will write and prioritize user stories with input and research from the team. Each sprint, the team chooses the top priority user stories, then builds functionality and tests it with actual users to measure whether the feature meets its intended outcome.

Our joint product team will understand if we're building the right thing by continuously getting our work in front of users (ideally, every few weeks or sprint). We will rely on your agency to recruit users for us to speak with. For a medium-sized project, we will likely want about six new users every two to four weeks.

How do you know if you're ready to work in a user-driven way?

- Do you have a first draft of who you think the main users are? Have you created personas?
- When is the last time you spoke to your users? Family and friends don't count.
- Which users are the priority? (They all can't be the priority.)
- Can you recruit three users for us to speak with before our first workshop?
- Will you allow the project solution to change as we learn from users?

6. We will revisit the project at a high level if there are major changes to project goals

If significant political or stakeholder pressures alter the goals of the project, causing it to veer towards mostly stakeholder design, ignoring a user- and outcome-focused approach, we may need to revisit at a high level.

What does this mean to you?

- All stakeholders need to feel comfortable with the principles in this playbook.
- Budget estimates may need to be revisited if the scope of the project changes considerably.
- We will have to include any new stakeholders in the engagement.
- The project delivery timeline may face delays if different staff skills are needed than are already on the team.
- The project may be put on hold if re-scoping is needed.

7. We transfer projects back to your team for ongoing support

We help get new projects and solutions off the ground and work to share our approach and process so your team can continue to support and manage our completed efforts. We do not offer long-term maintenance and support; your team should prepare yourselves or secure resources to take over the work when we are finished.

What does this mean to you?

You should have a plan for long-term support. Do you have an internal tech team with the capacity to run another modern web service? Do you have a plan for handling continued design, content, or customer service needs? If you do not, then you should begin to think through the planning and funding process to have a team lined up to take over the ongoing support of the project usually between six and 12 months after the beginning of the engagement.

Your long-term support should be available throughout the project to transition technical information and materials. Usually your project team will continue to support the project as we transition off, but the technical team may be new. The new team will need time to learn the specifics of the project and implementation; therefore, the new technical team should come onboard before our engagement finishes.

8. We deploy projects using predefined back-end methods and technology

There are some specific technical ways we work that are important for your team to consider when deciding if working with 18F is right for you.

- We deploy our services in the cloud instead of on-site servers.
- While we are hosting, operating, and maintaining the software, we own and run Federal Information Security Management Act (FISMA) compliance processes.
- We practice continuous change and continuous deployment of software alongside appropriate testing procedures before deployment. One advantage of this setup is that "change control" systems are not needed for durable development and testing.
- 18F does not fill a "systems integrator" role on its projects. Sometimes, our services may rely on dependencies where other teams provide support. We'll work with you to resolve all concerns in the parts of the project we own, but the project's needs may sometimes require the product owner to seek fixes from administrators of the other systems.
- We typically develop with market-supported languages used widely in the modern web development community, such as Ruby, Python, or Node.js. We generally do not develop solutions in .NET or Java. This allows us to attract strong talent and integrate easily with other products or tools.